REMARKS

Claims 1-10 and 12-26 are pending in the above-identified application. Claims 22-26 have been withdrawn from consideration according to the Final Office Action of June 11, 2009.

Issues under 35 USC 103(a)

Claims 1-10 and 12-21 have been rejected under 35 USC 103(a) as being unpatentable over Scholz '988 (CA 2,338,988) in view of Valcke '507 (US 5,714,507) and Rehnig '964 (US 5,968,964). This rejection is traversed based on the following reasons.

Final Office Action

Rehnig '964 is cited in the Final Office Action. Rehnig '964 discloses fungicidal liquid formulations. Rehnig '964 discloses at column 2 that the described triazole compounds may form a salt or addition product with "organic acids" which are described at column 2, lines 47-55. The described compositions of Rehnig '964 preferably include as a liquid carrier a mixture of 1-pentanol and 2-methylbutanol, and a non-polar organic co-solvent as noted at column 3, lines 10-12. Although Rehnig '964 mentions "water" at column 3, line 8, all of the examples and preferred embodiments include little, if any, water at all.

Rehnig '964 fails to disclose any examples of compositions which contain any significant amount of water and fails to disclose or suggest the presence of component (a2) as required by the composition of the present invention. The Examiner cites Rehnig '964 because this reference describes that the triazole compounds may form a salt or addition product with "organic acids". In this regard, it is noted that the active ingredients from the triazole class are weak bases (compare page 25, lines 35 and 36). Likewise, carboxylic acids are known to be weak acids. As is well known in the art, weak bases do not form stable salts with weak acids. It is noteworthy that all formulations described in the working examples of Rehnig '964 contain metconazole. There is, however, no working example of a formulation which would contain a salt or addition product of metconazole with an organic acid.

However, in the compositions of the present invention, the carboxylic acid is not used as a simple salt-forming agent. Actually, the carboxylic acid serves as solvent (compare reference

example 1, describing the dissolution characteristics of triazoles in selected carboxylic acids; see also page 25, lines 28-42, describing that the triazole is dissolved in the carboxylic acid). In this regard, note that claim 1 requires the molar ratio of carboxylic acid to active ingredient to be greater than one. This, too, reflects that the carboxylic acid is not a simple salt-forming agent. Thus, Rehnig '964 cannot be used to assert that one would use a carboxylic acid to dissolve a triazole.

The Examiner also appears to disregard that the present claims are directed to aqueous-based compositions (i.e. the compositions of the present invention contain at least 10 % by weight of water) whereas Rehnig '964 fails to describe any examples of compositions which contain any significant amount of water. This is important to note because the active ingredients from the triazole class are particularly difficult to incorporate into water-based formulations (as evidenced by the mixtures F12 to F15 described in example 2 of the present application). This is why Rehnig '964 proposes the use of a mixture of 1-pentanol and 2-methylbuanol for solubilizing triazoles (compare page 2, lines 10-18 of the present application). Rehnig '964, as well as the other references discussed below, fails to provide any reasonable basis for a motivation to one skilled in the art to use a carboxylic acid for dissolving a triazole, because these references fail to recognize that one can obtain an unexpectedly, advantageous homogenous and storage-stable formulations as in the presently claimed invention. Consequently, significant patentable distinctions exist over Rehnig '964.

Present Invention and Its Advantages

As outlined in the present application, the active ingredients from the triazole class are essentially insoluble in water so that the formulation of suitable aqueous solutions and, in particular, aqueous concentrates, is particularly difficult. For example, these active ingredients tend to recrystallize upon dilution with water in a tank mix (page 2, lines 10-15, of the present application). The bioregulatory active ingredients of formula (III) are quaternary ammonium salts which are usually employed in relatively larger amounts by weight than the active ingredient of the triazole class (see page 11, line 24-26). As a consequence, relatively large amounts of electrolyte have to be incorporated and this requires the addition of water to the

compositions. Thus, the formulation of stable and homogenous compositions is particularly difficult when active ingredients from the triazole class are to be co-formulated with bioregulatory active ingredients of the formula (III).

The formulations F12 and F13 described in the present application demonstrate that, despite addition of benzyl alcohol, a composition including tebuconazole (a triazole), chlormequat chloride (a bioregulatory active ingredient of formula (III)), Lutensol ON30 or Lutensol ON70 (surface active ingredients) and benzyl alcohol (a solvent) disadvantageously remains a non-homogenous system. In contrast, when a carboxylic acid (e.g. propionic acid) is added to the system, advantageously clear homogenous solutions without crystals present are obtained (compare formulations F10 and F11).

Distinctions over Scholz '988

Scholz '988 describes aqueous growth-regulating compositions which include at least one active compound of formula (I), e.g. chlormequat chloride or mepiquat chloride. Scholz '988 discloses that high amounts of the active compound of the formula (I) can be incorporated into monophasic aqueous homogenous formulations if at least one auxiliary selected from alkylglycosides, alkylsulfonates or alkylarylsulfonates, and quaternary ammonium salts is added to the formulation (page 5, lines 35-48). Thus, Scholz '988 addresses the problem of providing stable and homogenous concentrates on an aqueous base which have a high proportion of quaternary active ingredients such as chlormequat chloride or mepiquat chloride (page 4, lines 32-37). These compositions may contain other active compounds from the field of crop protection, such as, for example, other growth-regulating active compounds, in particular ethephon (page 11, lines 17-20)

Scholz '988 fails to disclose or suggest the use of active ingredients from the triazole class. More importantly, Scholz '988 fails to address problems that are encountered in formulating stable, homogenous and aqueous-based compositions which additionally include high amounts of such triazoles. As discussed above, some of the problems that may be encountered are set out on page 2, line 10, to page 3, line 10, of the present application.

On page 11, lines 9-15, of Scholz '988 the optional addition of a carboxylic acid is mentioned. However, Scholz '988 does not provide a specific example of a formulation employing such a carboxylic acid nor does Scholz '988 provide any reason for such an addition. Also, a person of ordinary skill in the art is aware of the fact that a number of active ingredients require a low pH value in order to be stable. For instance, ethephon was known to undergo decomposition at pH values above 3.5 as evidenced by the material safety data sheet "Bayer CropScience, Sicherheitsdaten-blatt, Chapter 10: Stability and Reactivity (Exhibit A) enclosed with the previous response, where it is stated that ethephon undergoes decomposition at pH values above 3.5 by eliminating ethylene. It is against this background that Scholz '988 suggests the addition of carboxylic acid.

In contrast, pesticidally active ingredients from the triazole class usually do not readily undergo degradation at high pH values. Thus, even if a person of ordinary skill in the art were to consider the addition of a triazole to the compositions described in Scholz '988, it would not have been obvious to also include a carboxylic acid, let alone to provide a molar ratio of carboxylic acid to triazole of greater than 1 or even greater than 4. Consequently, significant patentable distinctions exist over Scholz '988 such that the above rejection based thereon should be withdrawn.

Distinctions over Valcke '507

Valcke '507 discloses synergistic fungicidal compositions containing a fungicidal triazole and metconazole as well as a carrier (column 1, lines 21-26). As reflected by the examples section, Valcke '507 distinguishes between compositions for plant protection (column 14, lines 32, to column 16, line 31) and compositions for material protection such as wood protection (column 16, lines 33-46). The text in column 1, line 21, to column 7, line 53, and column 11, line 5, to column 14, line 26 relates to both composition types. However, the text in column 7, line 54, to column 8, line 47, is specifically concerned with compositions for use as agrochemicals in the protection of plants, fruit and seeds; whereas in contrast, the text in column 8, line 48, to column 14, line 23, is specifically concerned with compositions for use in wood protection. Thus, the water-dilutable homogenous concentrate, the composition of which is

described in column 10, lines 14-24 of Valcke '507, is a water dilutable wood-preservative liquid. It is, however, not disclosed or intended to be used for crop protection.

Valcke '507 fails to disclose or suggest the use of the ammonium compound of formula (III) as in the composition of the present invention. Valcke '507 further fails to disclose or suggest the employment of an aliphatic carboxylic acid in a plant regulating composition, such as a fungicidal composition. Rather, Valcke '507 clearly discloses the possible use of an aliphatic carboxylic acid only in the context of a "wood-preservation" composition. Thus, clear patentable distinctions exist between the present invention and Valcke '507. Therefore, Valcke '507 would not have led a person of ordinary skill in the art to consider the addition of a triazole such as metconazole together with a carboxylic acid.

It is again emphasized that Valcke '507 clearly distinguishes between compositions for plant protection (column 14, line 32, to column 16, line 31) and compositions for material protection such as wood protection (column 16, lines 33-46). The compositions of the present invention are intended to be used as pesticidally active bioregulators, for example in crop production, such as agriculture and horticulture (page 26, lines 1-4, of the present application). The same holds true for the teaching of Scholz '988, which relates to growth-regulating compositions. A person of ordinary skill in the art concerned with the formulation of plant growth-regulating compositions would not have taken compositions intended for material protection, such as wood protection, into account. It is noted that plant protection and production, on the one hand, and wood protection, on the other hand, are two different, non-related technical fields, as is illustrated by the different modes of application. Whereas plant protection and production compositions are usually applied to plants by broadcast spraying, in wood protection special processes which comprise the application of pressure, immersion techniques or electrospraying are employed in order to expose the wood to the composition. The occurrence of solids that may result from the crystallization of the triazole may hamper the efficient application of the composition by spraying and thus are problematic in the field of plant protection. However, this is not a problem in the application of wood-preserving compositions.

Moreover, it is only with respect to water-dilutable compositions including a triazole and a copper compound that Valcke '507 suggests the use of carboxylic acids as solubilizers

(compare column 9, line 51, to column 10, line 66). To put it another way, Valcke '507 discloses the use of carboxylic acids only with respect to wood-preservative liquids that employ a special type of triazole form, which is a metal salt complex formed by the triazoles with copper ions (compare column 2, line 29, to column 3, line 7). Since Valcke '507 is directed to compositions for plant protection and production, this reference fails to suggest using a carboxylic acid. This is why Valcke '507 fails to teach the use of a carboxylic acid when adding a triazole to the compositions described by Scholz '988. Consequently, significant patentable distinctions exist over Valcke '507.

Further, it is submitted that significant patentable distinctions exist between the present invention and all of the Scholz '988, Valcke '507 and Rehnig '964 references, whether taken separately or improperly combined. Further still, the above-noted evidence of unexpected, advantageous properties based on the comparative tests described in the present specification establishes that one skilled in the art would not have viewed the attempt to selectively combine all the components of the present invention together as being "predictable". Thus, the present situation is clearly distinguished from the decision of *KSR International Co. v. Teleflex Inc*, 82 USPQ 2d 1385, (U.S. Supreme Court 2007). Consequently, the above-noted rejection must be withdrawn.

It is submitted for the reasons above that the present claims define patentable subject matter such that this application should now be placed in condition for allowance.

If any questions arise in the above matters, please contact Applicant's representative, Andrew D. Meikle (Reg. No. 32,868), in the Washington Metropolitan Area at the phone number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Dated: September 11, 2009

Respectfully submitted,

By_____
Andrew D. Meikle
Registration No.: 32,868
BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Road
Suite 100 East
P.O. Box 747
Falls Church, Virginia 22040-0747
(703) 205-8000
Attorney for Applicant